

Refrigerants

R-134a

1,1,1,2 – TETRAFLUOROETHANE CF_3-CH_2F

GUARANTEED COMMERCIAL SPECIFICATIONS

STANDARD SPECIFICATIONS	LIMIT VALUE
Purity	≥ 99.5% weight
Water content	≤ 10 ppm weight
Non-condensable content (gas phase)	≤ 1,5 % volume
High boiling residues	≤ 0.01 % volume
Acitity (HCl)	≤ 1 ppm weight

MAIN APPLICATIONS

R-134a is a hydrofluorocarbon (HFC) which can be used for domestic, commercial and industrial refrigerated applications, as well as for air conditioning, fluid cooling and heat pump applications.

R-134a was the fluid of choice of automotive and agricultural air-conditioning system manufacturers. The fluid used in new automotive and agricultural air conditioning installations is now R-1234yf.

R-134a can also replace R-12 in existing systems by following the correct conversion procedure.

OILS

Use a polyol ester (POE).

Check with **Climalife** regarding the viscosity of the oil selected for your application and the miscibility with the fluid under consideration.

For automotive air conditioning, please refer to the constructor's advice: PAG oils are generally the recommended type.

PRECAUTIONS OF USE

Refer to the Safety Data Sheet*.

REGULATION

Use, implementation and recovery are governed by European regulation no. 2024/573.

It is also important to refer to the regulations in force in each country in Europe and outside Europe. *Find Safety Data Sheets (SDS) directly on our website www.climalife.com

R-134a PHYSICAL PROPERTIES

Molar mass	g/mol	102,03
Melting point	°C	- 103,3
Boiling point (at 1.013 bar)	°C	- 26,08
Temperature glide at 1.013 bar	K	0
Saturated liquid density at 25°C	kg/m^3	1207
Saturated vapour density at boiling point	kg/m^3	5,257
Vapour pressure at : 25°C 50°C	 bar bar	 6,654 13,18
Critical temperature Critical pressure Critical density	°C bar kg/m^3	101,1 40,59 512
Latent heat of vapourisation at boiling point	kJ/kg	217
Thermal conductivity of liquid at 25°C Thermal conductivity of vapour at 1.013 bar	W/(m.K) W/(m.K)	0,081 0,013
Surface tension at 25°C	10^{-3}N/m	8,03
Viscosity of liquid at 25°C Viscosity of vapour at 1.013 bar	10^{-3}Pa-s 10^{-3}Pa-s	0,195 0,012
Specific heat of liquid at25°C Specific heat of vapour at 1.013 bar	kJ/(kg.K) kJ/(kg.K)	1,425 0,8512
Cp/Cv ratio at 25°C at 1.013 bar		1,120
Flammability in air		Non-flammable
Flash point	°C	None
Classification NF-EN 378 / ASHRAE PE(S)R		 A1 Category 2
Ozone Depletion Potential	(R11 = 1)	0
GWP according to Regulation (EU) 2024/573 (F-Gas III) GWP (AR4 / AR6)	(CO_2 = 1)	1430 1430 / 1530

Please contact your distributor or our **Climalife** sales department for more information. In addition, if the refrigeration system you want to install, or are working on, does not appear to be a typical installation, please do not hesitate to contact us for advice and information.

The information contained in this product sheet is the result of our studies and experience. It is provided in good faith, but should not, under any circumstance, be taken to constitute a guarantee on our part or an assumption of our responsibility. This is particularly the case when third party rights are at stake or in situations where a user of one of our products fails to observe applicable regulations.